

### **REMARKS**

After careful consideration of the present Office Action, and correlation of the shorthand statement of the rejections with its reference to the prior Office Action, it is believed that the outstanding issues in this application are the following:

#### **Maintained Rejections**

- 9. Claims 1 & 9 : 103 → Quigley, Flepp
- 10. Claim 6 : 103 → Quigley, Flepp, Roeber
- 11. Claim 7 : 103 → Quigley, Flepp, Hill

#### **New Rejections**

- 13. Claim 6 : 112
- 14. Claims 13, 14, 20, 21 : 102(b)→ Heilmann
- 15. Claims 2, 11, 13, 14 : 103→Quigley, Flepp
- 16.\* Claims 4, 5, 15, 16 : 103→ Quigley, Flepp, Strassel
- 17. Claim 17 : 103→ Quigley, Flepp, Roeber
- 18. Claim 18 : 103→ Quigley, Flepp, Hill

Numbering above and below follows the notation on the paragraphs of the Office Action.

*\* Although not identified as such, this rejection was made in the previous Office Action.*

#### **9. Rejection of claims 1 and 9 under 35 U.S.C. 103 over Quigley and Flepp:**

As will be recalled, Quigley discloses a flexible pipe containing an unsealed metal flexible inner layer, and outer sealing layers at least one of which can be nylon, a polyamide. As admitted at page 5 of the prior Office Action, Quigley fails to explicitly teach that the inner layer (composite, or sealing layer) is a blend of a polyamide and polyolefin having a polyamide matrix. To remedy this deficiency, however, the Office Action cites Flepp which discloses a multilayer pipe having an inner layer of a blend of polyamide and polyolefin with a polyamide matrix, and argues that one of ordinary skill in the art would have used this layer as the mixture of the inner layer in Quigley, as such a layer is "a well known adhesion promoting material for use as the material of an inner of a multilayer hose." While this sentence may be true, as far as it goes, what Flepp does *not* teach is that the layer is useful for adhering a polymer layer to a metal layer.

It is submitted that there is no motivation for one of ordinary skill in the art to replace the composition of the polyamide or polyolefin inner layer of Quigley, with a polyamide 6, polyamide 11 or 12 plus compatibilizer layer as disclosed in Flepp. The properties of these layers are not seen to be the same, nor are they in a similar location. Nothing in Quigley indicates that its structure is not functional, and thus there is simply not any motivation to make the substitution suggested in the Office Action.

It is argued that the Office Action argues that Flepp teaches an additional “metal layer” which is a thermoplastic material made of metal particles, for example. However, such an additional fifth layer would be bonded to the polyamide inner layer, and thus not in direct contact with the polyamide 6/polyamide 11 or 12 plus compatibilizer layer. Thus, no conclusion can be drawn as to the affinity of the polyamide plus polyolefin composition, and a metal layer.

In any event, it is clear that the combination of references does not suggest that the inner layer be a blend of “one” polyamide and a polyolefin having said polyamide matrix. Support for this clarification of the claim may be found in the present specification, for example, at page 9, lines 5-6, indicating that the polyamide may be “one” of the polyamides listed. Accordingly, Flepp, which discloses two polyamides (6 and 11 or 12) plus a compatibilizer (polyolefin), in other words, two polyamides which are not compatible together and thus necessarily require a compatibilizer, simply does not teach the use of a single polyamide and polyolefin as claimed, inasmuch as where a single polyamide is used, there is no incompatibility with another polyamide, and Flepp’s reason for using the compatibilizer (polyolefin) does not exist. As a result, Flepp fails to suggest the present claims. Withdrawal of this rejection is accordingly respectfully requested.

10. Claim 6 has been rejected under 35 U.S.C. 103 over Quigley, Flepp and Roeber.

Claim 6 is dependent upon claim 1, and thus is patentable for the reasons discussed above, inasmuch as Roeber, cited to disclose functionalized polyolefins with carboxylic acid or carboxylic and hydride functional groups as a tie layer for a polyolefin, does nothing to remedy the above-noted deficiencies. Withdrawal of this rejection is therefore also respectfully requested.

11. Claim 7 has been rejected under 35 U.S.C. 103 over Quigley, Flepp and Hill:

Claim 7 is dependent upon claim 1, and is thus patentable for the reasons discussed above, inasmuch as Hill does nothing to remedy the above-noted deficiencies of Quigley and Flepp, instead being cited for a disclosure of high density polyethylene as polyethylene bonded to a polyamide. Withdrawal of this rejection is therefore also respectfully requested.

12. Claim 6 has been rejected under 35 U.S.C. 112, second paragraph.

The typographical error in the claim has been corrected, an antecedent basis in claim 1 for the recitation of the "coextrusion tie layer" is now found. Withdrawal of this rejection is respectfully requested.

14. Claims 13, 14, 20 and 21 are rejected under 35 U.S.C. 102(b) over Heilmann:

This rejection is over a newly cited reference. It is argued, at page 4 of the Office Action, that Heilmann teaches pipe with an inner layer comprising a copolymer having polyamide blocks and polyether blocks. This alternative has been eliminated from the referenced claims, and it is submitted that Heilmann does not anticipate them. Withdrawal of this rejection is respectfully requested.

15. Claims 2, 11, 13 and 14 are rejected under 35 U.S.C. 103 over Quigley and Flepp:

The deficiencies of Quigley and Flepp have been discussed above in conjunction with rejection in number 9. Claims 2, 11, 13 and 14 herein also recite that the thermoplastic polymer (A) is a blend of one polyamide and a polyolefin having said polyamide matrix. Accordingly, for the reasons discussed above, this rejection is also moot, and should be withdrawn.

16. Claims 4, 5, 15 and 16, rejected under 35 U.S.C. 103, over Quigley, Flepp and Stressel:

Though not indicated as such, this rejection is maintained over that in the prior Office Action. Claims 4 and 5 are dependent upon claim 2, and are patentable for the reasons discussed above, inasmuch as Stressel does nothing to remedy the deficiencies of Quigley and Flepp,

Stressel being cited solely for its disclosure of various polyamides. Withdrawal of this rejection is therefore also respectfully requested.

17. Claim 17, rejected under 35 U.S.C. 103 over Quigley, Flepp and Roeber:

The combination of Quigley, Flepp and Roeber has been discussed in conjunction with claim 6. Quigley and Flepp are deficient in suggesting the present claims and, accordingly, regardless of the disclosure of Roeber which does not remedy these deficiencies (having been cited for its disclosure of carboxylic acid or carboxylic acid anhydride functional groups) withdrawal of this rejection is also respectfully requested.

18. Claim 18 rejected under 35 U.S.C. 103 over Quigley, Flepp and Hill:

As discussed in conjunction with the rejection of claim 7, also employing the same three references, this combination of references fails to suggest the present claims. Withdrawal of this rejection is also respectfully requested.

All of the claims of the application are submitted to be in condition for allowance, and passage to issue is strongly urged. Should the Examiner have any questions or comments, he is invited to telephone the undersigned at the number below.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,

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